

WHAT IS CLAIMED:

1           1. A polystyrene composition or styrene  
2 copolymer composition comprising a white oil as a  
3 plasticizer, wherein the white oil comprises a  
4 Fischer-Tropsch derived oil.

1           2. The composition of claim 1, in which the  
2 Fischer-Tropsch derived white oil has a kinematic  
3 viscosity at 100 °C of more than 2 mm<sup>2</sup>/sec.

1           3. The composition of claim 2, in which the  
2 Fischer-Tropsch derived white oil has a kinematic  
3 viscosity at 100 °C of more than 7 mm<sup>2</sup>/sec.

1           4. The composition of claim 2, in which the  
2 Fischer-Tropsch derived white oil has a content of  
3 mineral hydrocarbons with carbon numbers less than 25  
4 of not more than 5% wt and an average molecular  
5 weight not less than 480 g/mol.

1           5. The composition of claim 1 in which the  
2 composition comprises between 0.1 wt% and 10 wt% of  
3 the Fischer-Tropsch derived oil.

1           6. The composition of claim 5, in which the  
2 composition comprises between 2 wt% and 5 wt% of the  
3 Fischer-Tropsch derived oil.

1           7. The composition of claim 1, in which the  
2 Fischer-Tropsch derived oil has a Saybolt color  
3 greater than +25.

1           8. The composition of claim 7, in which the  
2 pour point of the Fischer-Tropsch derived oil is  
3 below -10 °C.

1           9. The composition of claim 8, in which the  
2 content of polar compounds in the Fischer-Tropsch  
3 derived oil is less than 1 wt% and the content of  
4 non-cyclic isoparaffins is between 75 wt% and 98 wt%.

1           10. The composition of claim 9, in which the  
2 composition comprises between 0.1 wt% and 10 wt% of  
3 the Fischer-Tropsch derived oil.

1           11. The composition of claim 10, in which the  
2 composition comprises between 0.1 wt% and 10 wt% of  
3 the Fischer-Tropsch derived oil.

1           12. The composition of claim 11, in which the  
2 Fischer-Tropsch derived oil has a kinematic viscosity  
3 at 100 °C of more than 2 mm<sup>2</sup>/sec.

1           13. The composition of claim 12, in which the  
2 Fischer-Tropsch derived white oil has a content of  
3 mineral hydrocarbons with carbon numbers less than 25  
4 of not more than 5 wt% and an average molecular  
5 weight of not less than 480 g/mol.

1           14. The composition of claim 13, in which the  
2 Fischer-Tropsch derived oil has a 5 wt% recovery  
3 boiling point above 391 °C.

1           15. A process for preparing a white oil  
2 comprising:

3           (a) hydrocracking/hydroisomerizing a Fischer-  
4 Tropsch derived feed, wherein compounds having at  
5 least 60 or more carbon atoms and compounds having at  
6 least 30 carbon atoms in the Fischer-Tropsch derived  
7 feed have a weight ratio of at least 0.2 wt% and  
8 wherein at least 30 wt% of compounds in the Fischer-  
9 Tropsch derived feed have at least 30 carbon atoms;

10          (b) separating the product of step (a) into one  
11 or more lower boil distillate fraction(s) and a  
12 higher boiling white oil precursor fraction;

13          (c) performing a pour point reducing step to the  
14 white oil precursor fraction obtained in step (b);  
15 and,

16          (d) isolating the white oil by distilling the  
17 product of step (c).

1           16. The process of claim 15, in which the  
2 Fischer-Tropsch derived feed comprises a C<sub>20+</sub> fraction  
3 having an ASF-alpha value of at least 0.925.

1           17. The process of claim 15, in which the  
2 Fischer-Tropsch derived feed has an initial boiling  
3 point below 200 °C.

1           18. The process of claim 15, in which the  
2 hydrocracking/hydroisomerizing in step (a) is  
3 performed in the presence of hydrogen and a catalyst.

1           19. The process of claim 15, in which the  
2 white oil precursor of step (b) has a T<sub>10 wt%</sub> boiling  
3 point between 300 °C and 450 °C.

1           20. The process of claim 15, in which the  
2 pour point reducing step (c) comprises catalytic  
3 dewaxing.

4